MODS Productivity Data

I. PREFACE

A. Purpose and Content

USPS-FY14-23 provides FY2014 productivity data for selected operations at plants, Network Distribution Centers (NDCs, formerly Bulk Mail Centers or BMCs), and Remote Encoding Centers (RECs).

B. Predecessor Documents

Docket No. R2006-1, USPS-LR-L-56, Part III.
Docket No. ACR2007, USPS-FY07-23.
Docket No. ACR2008, USPS-FY08-23.
Docket No. ACR2009, USPS-FY09-23.
Docket No. ACR2010, USPS-FY10-23.
Docket No. ACR2011, USPS-FY11-23.
Docket No. ACR2012, USPS-FY12-23.
Docket No. ACR2013, USPS-FY13-23.

C. Corresponding Non-Public Document

There is no corresponding non-public document.

D. Methodology

The productivities for plant and NDC operations employ data from the Management Operating Data System (MODS). The calculations follow the methodology from Docket No. R2006-1, USPS-LR-L-56, Part III, as modified in Docket No. RM2012-2, Proposals Sixteen and Seventeen (approved in Commission Order No. 1383) and Docket No. RM2014-1, Proposal Eight (approved in part in Commission Order No. 1877). For FY2014, the calculations have been implemented using the Stata software package, replacing previous Fortran and TSP code, without changing the approved methodology.

Productivities for Remote Encoding Center (REC) operations are based on image volumes and console hours from the WebROADS system, adjusted for "overhead" workhours included in the MODS workhour total.

In USPS-FY13-23, Carrier Sequence Barcode Sorter (CSBCS) productivity was calculated using the methodology described in Docket No. RM2010-5, Proposal Twenty-Seven (approved in Postal Regulatory Commission Order No. 394). The Postal Service observed in USPS-FY13-23 that the last CSBCS equipment was withdrawn from service at the end of FY2013. As a result of the CSBCS

retirement, the data needed for the CSBCS calculation do not exist, and the CSBCS productivity has not been updated for FY2014.

E. Input/Output

The productivity data are used in USPS-FY14-10, USPS-FY14-11, and USPS-FY14-15. Additionally, the console hours used to develop the REC productivities are used in USPS-FY14-7 (and USPS-FY14-NP18) to assign LDC 15 REC labor costs to cost pools.
Seven.

II. ORGANIZATION

The productivity data are presented in the Microsoft Office Excel workbooks 'YRscrub2014.xlsx', 'NDCscrub2014.xlsx', 'RECProds2014.xlsx'.

Table 1. MODS Productivities for Selected Plant Operations

Group	Description	Shape	TPF/Hour	TPH/TPF
4	LCREM	Letters	1,701	1.000
5	Tray Sortation Outgoing	Letters	111	0.897
6	Tray Sortation Incoming	Letters	98	0.907
7	Out BCS Primary	Letters	8,024	0.970
8	Out BCS Secondary	Letters	9,457	0.983
9	In BCS MMP	Letters	5,824	0.985
10	In BCS SCF/Primary	Letters	6,530	0.984
11	In BCS Secondary (1 Pass)	Letters	6,547	0.977
12	In BCS Secondary (2 Pass)	Letters	9,205	0.991
14	Manual Out Primary	Letters	671	1.000
15	Manual Out Secondary	Letters	1,081	1.000
16	Manual In MMP	Letters	1,180	1.000
17	Manual In SCF/Primary	Letters	1,177	1.000
18	Manual In Secondary	Letters	645	1.000
21	AFSM100 Out Primary	Flats	1,483	0.971
22	AFSM100 Out Secondary	Flats	2,449	0.976
23	AFSM100 In MMP	Flats	1,572	0.977
24	AFSM100 In SCF	Flats	1,757	0.981
25	AFSM100 In Primary	Flats	917	0.977
26	AFSM100 In Secondary	Flats	1,684	0.979
27	AFSM100 ATHS Out Primary	Flats	2,030	0.973
28	AFSM100 ATHS Out Secondary	Flats	1,225	0.975
29	AFSM100 ATHS In MMP	Flats	1,880	0.980
30	AFSM100 ATHS In SCF	Flats	1,752	0.979
31	AFSM100 ATHS In Primary	Flats	1,458	0.979
32	AFSM100 ATHS In Secondary	Flats	1,983	0.979
33	AFSM100 AI Out Primary	Flats	2,382	0.967
34	AFSM100 AI Out Secondary	Flats	2,302	0.975

35	AFSM100 AI In MMP	Flats	1,774	0.977
36	AFSM100 AI In SCF	Flats	1,846	0.977
37	AFSM100 AI In Primary	Flats	2,051	0.976
38	AFSM100 AI In Secondary	Flats	2,505	0.979
39	AFSM100 ATHS/AI Out Primary	Flats	5,156	0.966
40	AFSM100 ATHS/AI Out Secondary	Flats	5,724	0.967
41	AFSM100 ATHS/AI In MMP	Flats	4,861	0.974
42	AFSM100 ATHS/AI In SCF	Flats	4,438	0.975
43	AFSM100 ATHS/AI In Primary	Flats	4,782	0.971
44	AFSM100 ATHS/AI In Secondary	Flats	4,272	0.974
45	UFSM1000 Outgoing	Flats	1,527	0.869
46	UFSM1000 Incoming	Flats	1,982	0.938
57	Manual Out Primary	Flats	658	1.000
58	Manual Out Secondary	Flats	666	1.000
59	Manual In MMP	Flats	691	1.000
60	Manual In SCF	Flats	560	1.000
61	Manual In Primary	Flats	647	1.000
62	Manual In Secondary	Flats	196	1.000
63	Manual In	Parcels	283	1.000
64	APBS Outgoing	Parcels	379	0.911
65	APBS Incoming	Parcels	219	0.891
66	LIPS Outgoing	Parcels	na	na
68	APPS Outgoing	Parcels	617	0.886
69	APPS Incoming	Parcels	319	0.893
70	Manual Outgoing	Parcels	374	1.000
75	PARS WASTE MAIL	Letters	2,520	1.000
76	PARS MANUAL DISTRIBUTION	Letters	5,306	1.000
77	CIOSS RTS IMAGE LIFT MODE	Letters	7,191	0.963
78	CIOSS INTERCEPT LABEL MODE	Letters	6,746	0.923
79	CIOSS FORWARDS IMAGE LIFT MODE	Letters	6,815	0.986
80	CIOSS REVERSE SIDE SCAN	Letters	7,134	0.916
81	CIOSS RESCAN MODE	Letters	4,778	0.987
82	CIOSS OTHER MODE	Letters	3,266	0.962
83	CIOSS INTERCEPT IMAGE LIFT MODE	Letters	3,635	0.979
84	CIOSS FORWARDS LABEL MODE	Letters	6,581	0.899
85	CIOSS RTS LABEL MODE	Letters	7,046	0.830
86	FSS	Flats	766	0.897

Source: USPS-FY14-23, YRscrub2014.xlsx

Table 2. MODS Productivities for Selected NDC Operation Groups

Group	Total TPF	Total TPH	Total Hours	TPF/Hour
PPSM	271,812,498	260,647,070	847,048	321
SPSM	768,331,108	734,789,651	2,517,081	305
SSM	32,643,991	29,292,774	310,672	105
NMO/Manual Parcels	34,344,210	34,248,535	669,682	51
Outgoing Pouching	45,888,226	45,888,226	156,670	293

Source: USPS-FY14-23, NDCscrub2014.xlsx

Table 3. Remote Encoding Center Productivities

Product	Images Keyed	Console Hours	Productivity (images per console hour)	Productivity Adjusted for Overhead
APPS	303,943,107	321,180	946	819
Flats	417,089,504	428,574	973	843
Letters	187,218,151	183,523	1,020	883
COA	31,768,664	190,577	167	144
PARS	777,657,508	624,835	1,245	1,077
Total	**1,717,676,934**	**1,748,690**	**982**	**850**

Source: USPS-FY14-23, RECprods2014.xlsx

III. PROGRAM DOCUMENTATION

A. Mail Processing Plant Productivities

Program: **modsprod_fy14.do** – Stata program that computes plant productivity statistics reported in YRscrub2014.xlsx.

First, the MODS data are merged with datasets indicating assignmenets of 3-digit MODS operations to operation groups, and identifying the MODS facilities and NDCs whose data are used in the productivity calculations. TACS default operations are screened prior to further aggregation.[1] The 3-digit operation-level data are summed (collapsed) to operation group. The TPF variable is replaced with TPH in cases where TPH is greater than TPF, which serves to transfer manual TPH into the TPF variable.[2] Subsequent calculations employ TPF for all operation groups.

The observation-level productivity (prod1) is calculated as the ratio of TPF to workhours by site, operation group, and month. Observations with zero workhours and/or TPF are eliminated by dropping observations with zero or missing values of prod1. The first and 99th percentiles of the productivity distributions for each operation group are computed, and observations in the top and bottom one percent tails of the productivity distributions are eliminated as outliers. Finally, the program computes group sums of TPF, TPH, and workhours over observations remaining after the screening steps. The productivity is the ratio of the sum of screened TPF to the sum of screened workhours. An Excel output file is created for subsequent importation into the YRscrub2014.xls Excel spreadsheet.

Productivities for groups 3, 20, 73, and 74 (REC productivities) are obtained from REC operating data reported in the WebROADS system, and thus are not reported in the spreadsheet; see Section C, below.

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[1] TACS designates certain 3-digit operation numbers as default operations. These operations accumulate workhours in operations where the designated activity may not actually be present, and the workhours assigned to the affected operations 'by default' tend to be large relative to the 'true' data. Prescreening reduces the potential for the default workhours to bias the affected productivities downward.

[2] For manual operations, MODS reports zero TPF for all observations. Historically, TPH values greater than TPF were relatively rare anomalies in MODS data for automated operations. (Since TPH is defined as TPF less rejects, TPF should always be at least as great as TPH.) Automated entry of end-of-run data into MODS via WebEOR effectively eliminated these anomalies.

Input: **opmap14.xlsx** - Map of MODS operations to operation groups used in the productivity analysis, in Excel workbook
finlist14.xlsx – Map of finance numbers to site IDs used in the productivity analysis
ndc_fins14.dta – Stata dataset with list of NDC and ASF finance numbers
MODS_MONTH_FY14.csv - Monthly FY 2014 MODS TPF, TPH, and workhour data by month, finance number, and operation, as comma-separated text file

Output: **mods2014prod_merged.dta** – Stata dataset (by operation, month, and finance number) merging FY 2014 MODS data, operation-to-group, and finance number maps
mods2014prod_prescreeen.dta – Stata dataset containing FY 2014 MODS data by site ID, month and operation prior to screening, for operations included in the productivity groups
MODSprod2014.xlsx – Excel workbook with FY2014 screened TPH, TPF, hours, productivity (TPF/hour) and TPH/TPF ratios, by operation group; YRscrub2014.xlsx reformats these data.

B. NDC Productivities

Program: **ndcprod_fy14.do** – Stata program that computes productivity statistics, reported in NDCscrub2014.xlsx, for the following operation groups: PPSM, SPSM, SSM, NMO/Manual Parcels, and Outgoing Pouching.

The data processing procedures for the NDC operation groups are substantially identical to those described above for program modsprod_fy14.do.

Input: **mods2014prod_merged.dta** – Stata dataset of MODS data, produced in modsprod_fy14.do (see above)

Output: **ndc2014prod_prescreen.dta** - Stata dataset containing FY 2014 data by site ID, month and operation group prior to screening
NDCprod2014.xlsx - Excel workbook with FY2014 screened TPH, TPF, hours, productivity (TPF/hour) and TPH/TPF ratios, by operation group; YRscrub2014.xlsx reformats these data.

C. REC Productivities

Spreadsheet: **RECprods2013.xls** – Excel spreadsheet containing Remote Encoding Center (REC) productivities for APPS, Flat, Letter, COA, and PARS images for GFY 2013. Productivities calculated from WebROADS images and console hours are adjusted for overhead (e.g., on-the-clock breaks) using MODS hours.